DE 101 42 397 A

19 FEDERAL REPUBLIC 12 Patent Application Laid Open to Public Inspection F 01 N 3/08

51 Int. Cl.<sup>7</sup>:

**OF GERMANY** 

10 DE 101 42 397 A 1

F 01 N 9/00

[emblem]

21 File number:

101 242 397.7

22 Filing date: 43 Laid open date: August 30, 2001 June 27, 2002

**GERMAN** PATENT OFFICE AND TRADEMARK OFFICE

30 Convention priority:

00-385164

December 19, 2000, Japan

71 Applicant:

Mitsubishi Denki K.K., Tokyo/Tokyo, Japan

74 Attorney or agent:

HOFFMANN • EITLE, 81925 Munich

72 Inventors:

Katashiba, Hideaki, Tokyo/Tokyo, Japan; Wachi, Satoshi, Tokyo/Tokyo, Japan; Mitsuda, Kenro, Tokyo/Tokyo, Japan; Hamano, Kouji, Tokyo/Tokyo, Japan

The following information has been taken from the documents filed by the applicant

Request for examination pursuant to Sec. 44 of the Patent Act has been filed.

- 54 Device for cleaning the exhaust of an internal combustion engine
- A device for cleaning the exhaust of an internal combustion engine features an improved cleaning efficiency even during lean-burn operation without increasing fuel consumption. The device has an electrochemical catalyst (5) installed in the exhaust system (3) of the internal combustion engine (1). The electrochemical catalyst (5) has an electron-conducting substance and an ion-conducting substance, such that an oxidizing reaction and a reducing reaction are promoted by the conduction of ions and electrons, and the exhaust gas (G) in the exhaust system is electrochemically cleaned.

[see source for figure]

**ENGINE** 

THREE-WAY **CATALYST** 

**ELECTROCHEMICAL** CATALYST

THREE-WAY CATALYST

**EXHAUST AMOUNT ESTIMATING MEANS** 

REDUCING-AGENT **FEED EVALUATION MEANS** 

MEANS FOR EVALUATING THE STATE OF THE ELECTROCHEMICAL CATALYST